

Eden Park Air Monitoring Study

Public Meeting Discussion

June 23, 2021



DELAWARE DEPARTMENT OF
NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL

Reasons for Implementing the Study

Community Concerns

Dust

- Unable to dry clothes outside
- Dirt rapidly builds up on vehicles
- Dirt clogging HVAC filters
- Dirt coming into homes
- Dirt Composition



Reasons for Implementing the Study

DNREC Observations

- Dirt on roadways
- Dust from unpaved surfaces
- Dirt buildup on monitoring equipment



Eden Park Monitoring Project

The Eden Park Project began with the Eden Park Study and based on early results spun off two additional studies.

Eden Park Monitoring Project made up of three studies:

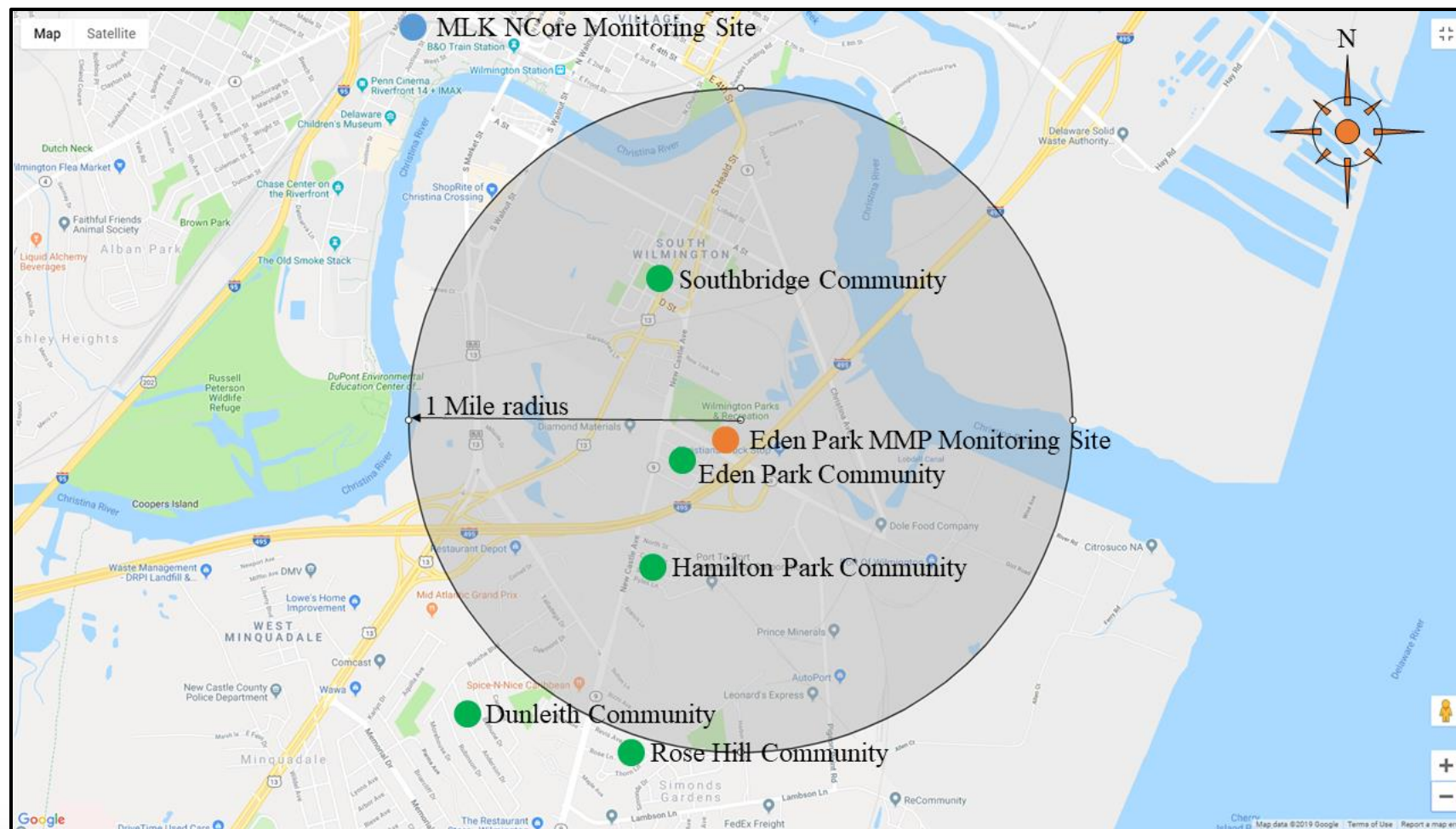
- Eden Park Study
- Dust Distribution Study
- XACT Study



Eden Park Study

Eden Park Study Objectives:

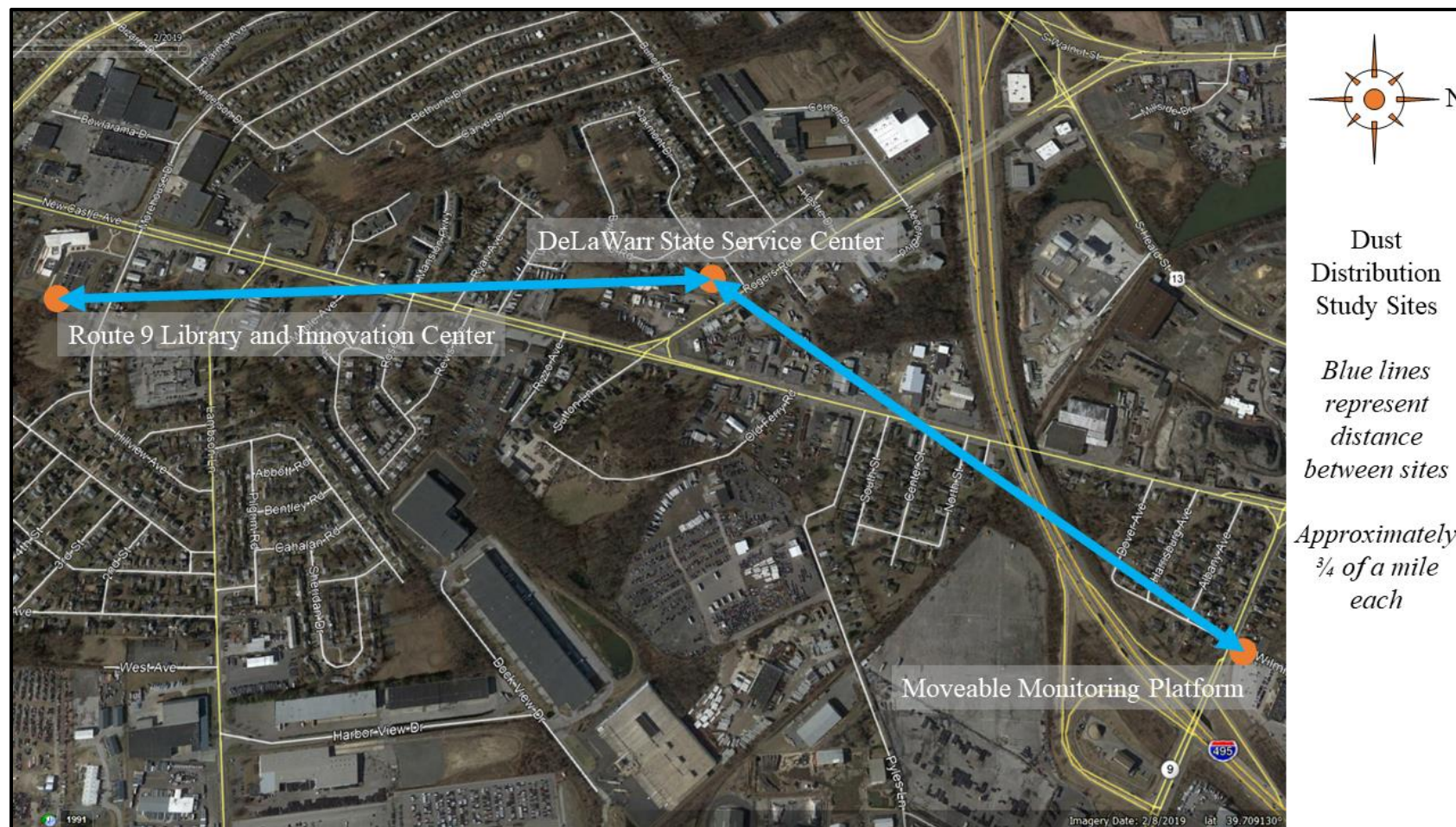
- What pollutants are found in Eden Park?
- How does observed pollution compare to observations from Delaware's Monitoring Network?
- Focus on monitoring for "dust" what we refer to as particulate matter (PM).



Dust Distribution Study

Dust Distribution Study Objectives:

- How do "dust" concentrations vary along the upper Route 9 corridor?
- Do Volatile Organic Compounds vary between sites?



XACT Study

XACT Monitor Study Objectives:

- What are the sources of the “dust” at Eden Park?

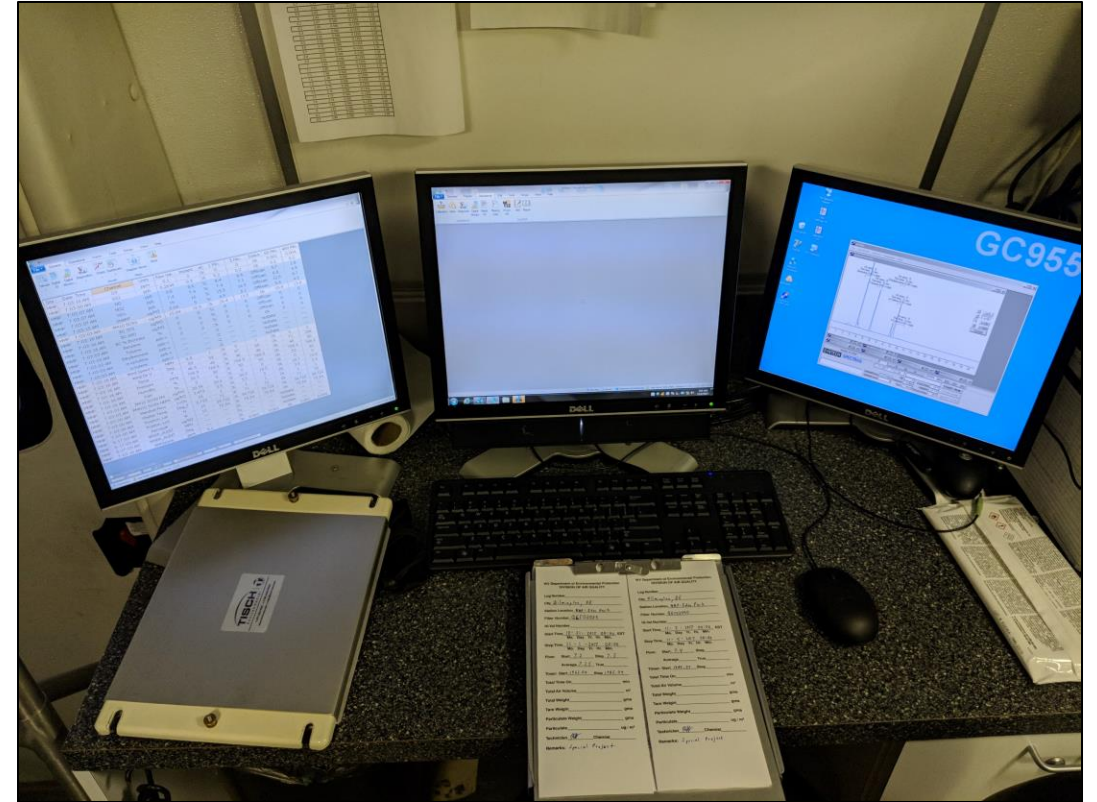


Results

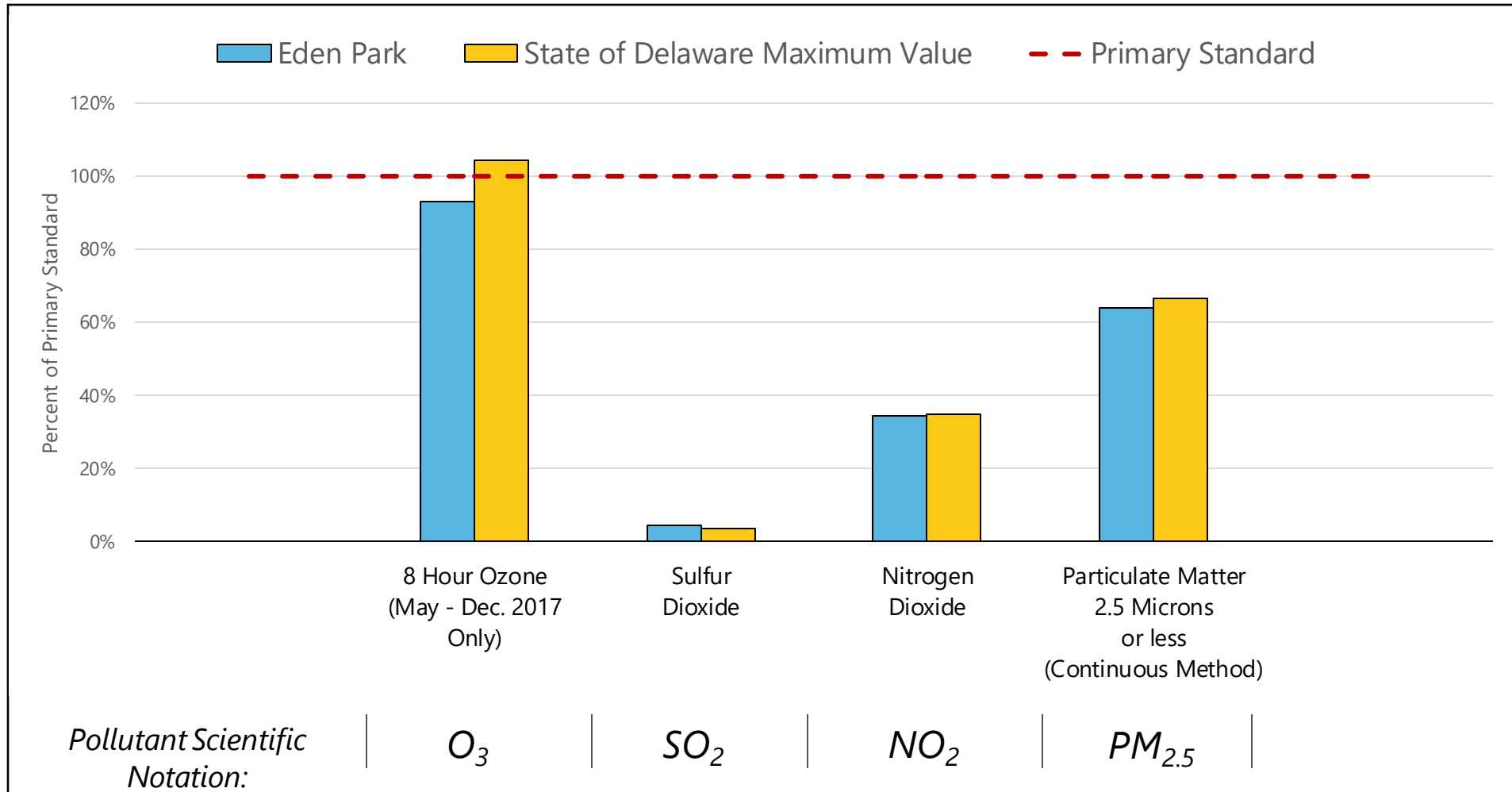
More detailed analyses are available in the analytical report

Website - <https://de.gov/airstudies>

Today we are focusing primarily on the results related to “dust” and how those results informed our next steps.

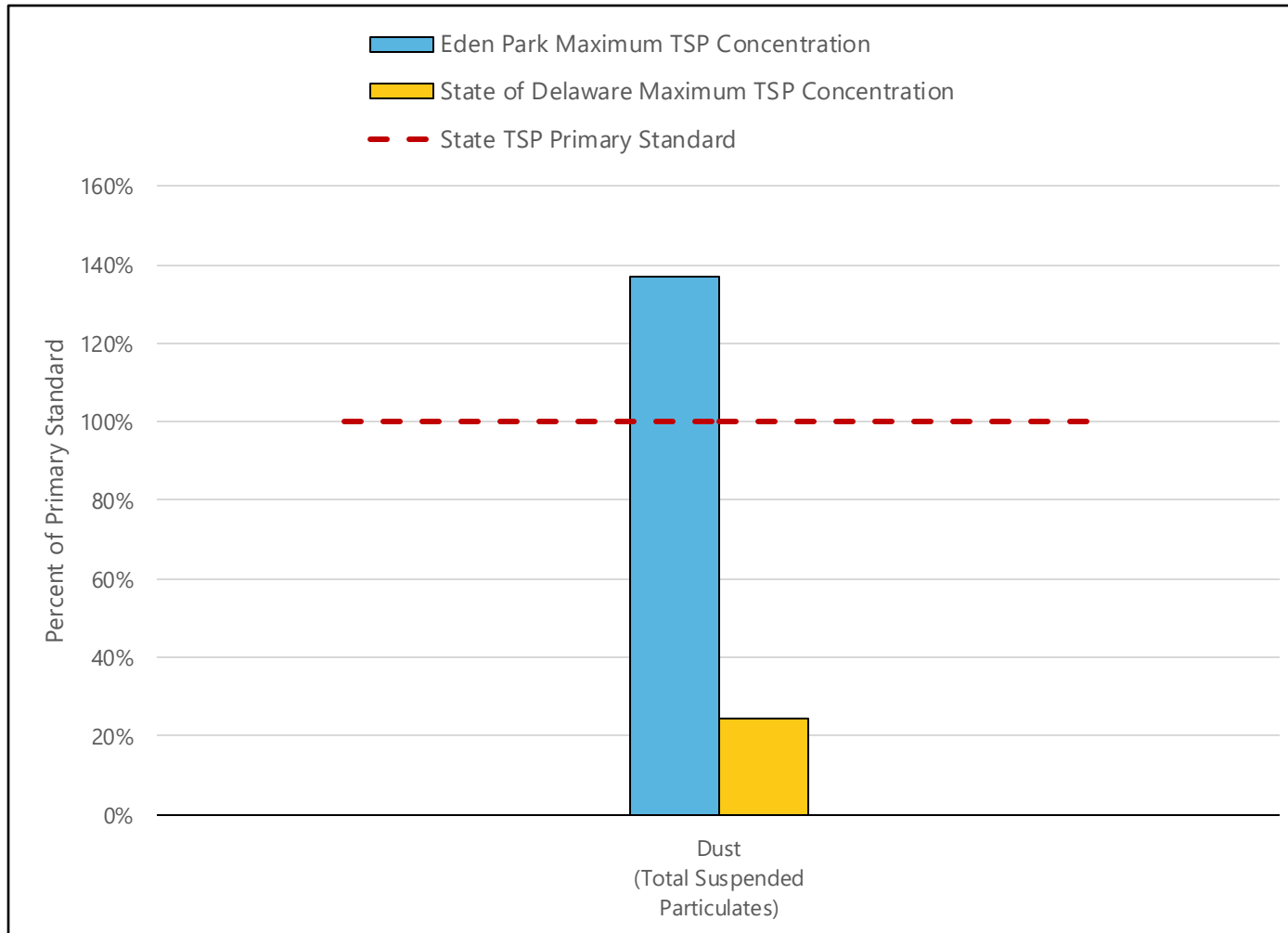


Results



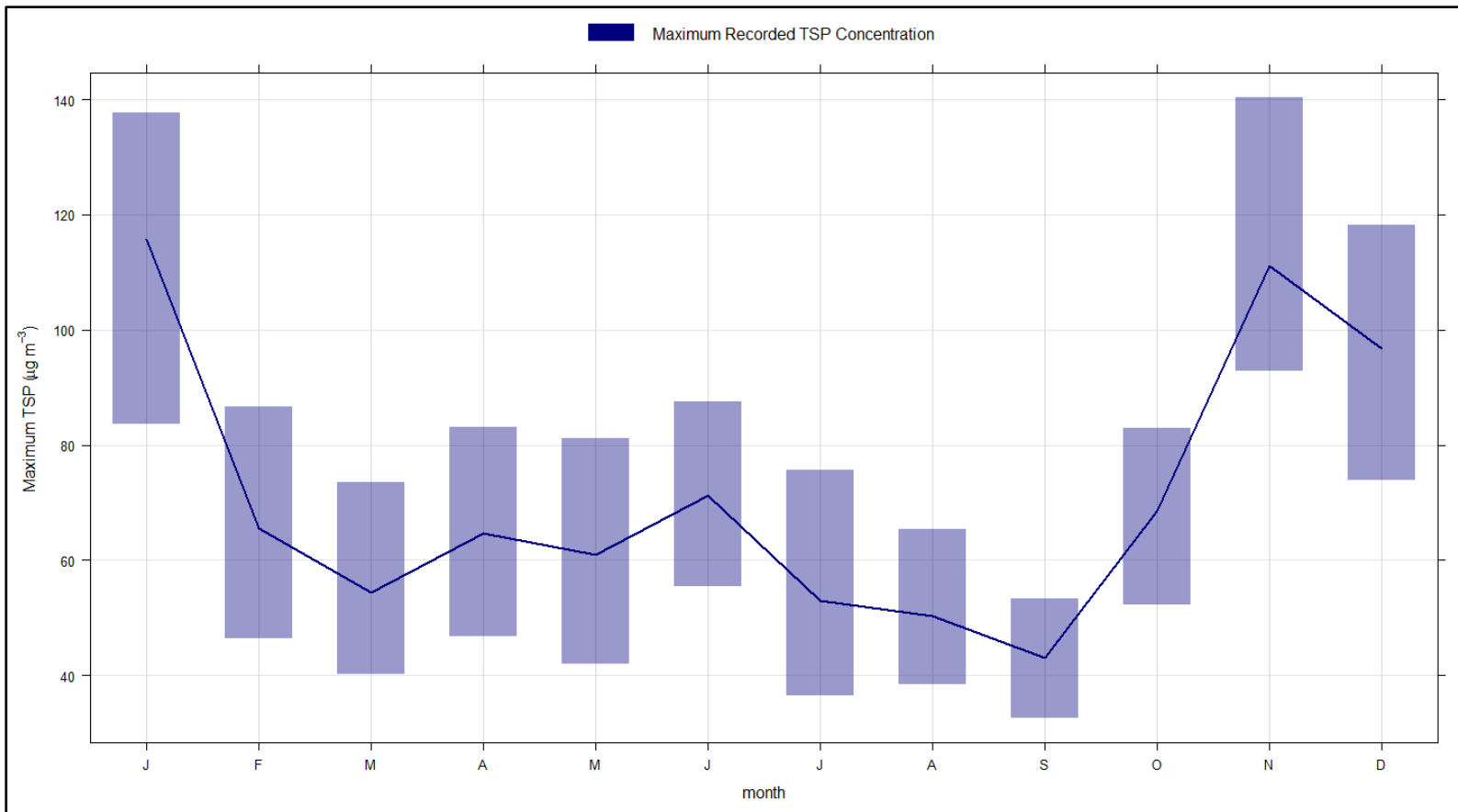
- No pollutant observations were recorded above Primary National Standards at Eden Park during the project
- Pollutant amounts observed at the Wilmington site were most similar

Results



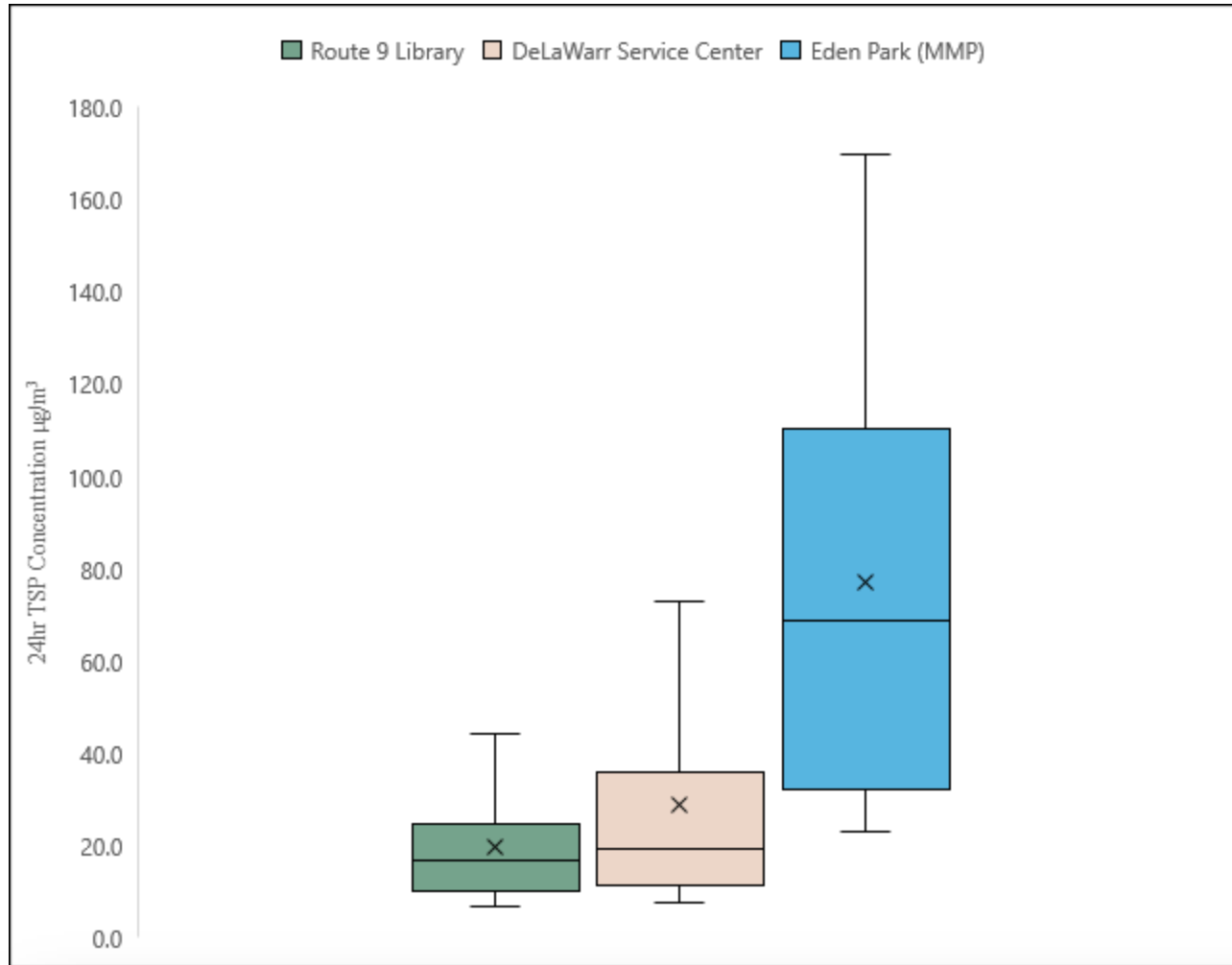
- Highest observations for “dust”, what we refer to as Total Suspended Particulates (TSP) were significantly higher in Eden Park than in Wilmington
- No longer a Primary National Standard for TSP
 - *PM_{2.5} & PM₁₀ have health-based standards and were below the standard as seen in the previous slide*
- Delaware keeps old standards as “Indicators of Action”

Results



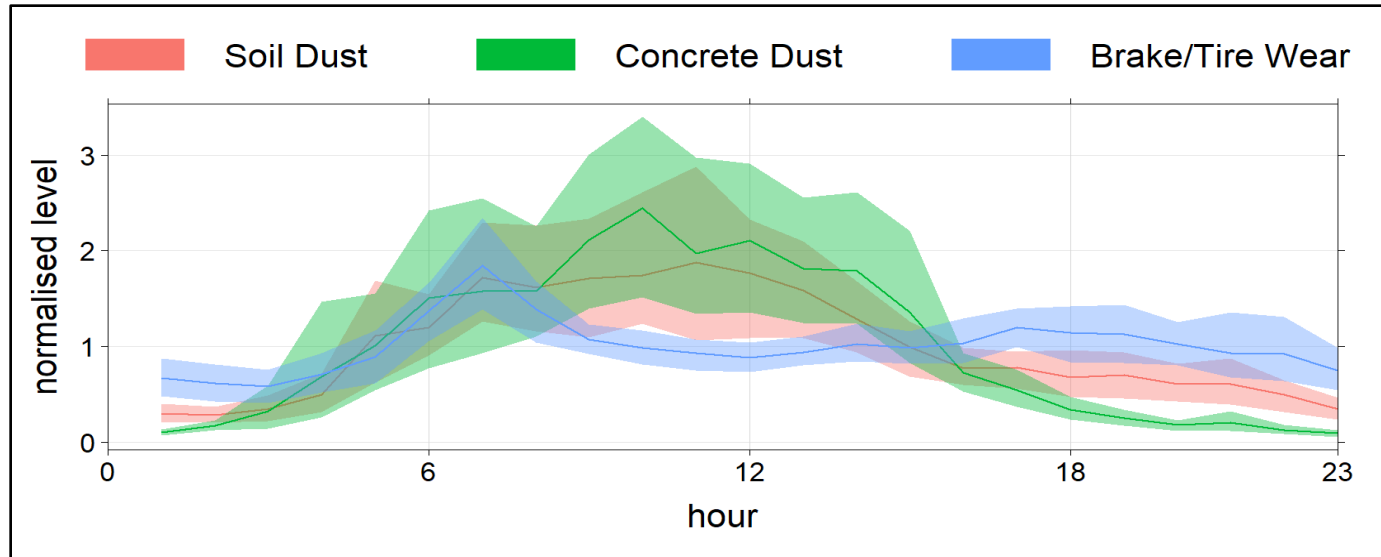
- The highest amounts of “dust” observed tended to be much higher during the late fall and winter months from November through January

Results



- The three Dust Distribution Study Sites were compared to find out if the high level of “dust” was an issue outside of Eden Park
 - The amount of “dust” observed at Eden Park was significantly higher than the other three sites
 - Differences in “dust” amounts between the Route 9 Library and DeLaWarr Center were not significant

Results



The results of the XACT Study used a sophisticated computer model based on the observations recorded by the XACT monitor to help us figure out what the sources of the “dust” might be.

- The model showed that that when “dust” concentrations were highest there were estimated to be three main sources:
 - Concrete Dust
 - Soil Dust
 - Brake/Tire wear

Ongoing Dust Mitigation Actions - DNREC

- In depth review of facility permits
 - Dust Control Plans
- Discussion of concerns with local facilities
- Increase of area inspections

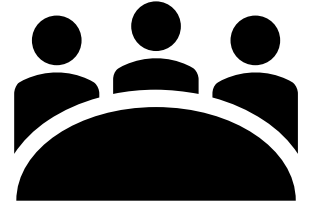


Ongoing Dust Mitigation Actions - Facilities

- Use of water to suppress dust on roads and piles – water trucks and water sprays
- Sweeping of paved roads onsite
- Voluntary sweeping of adjacent streets
- Voluntary washing of trucks



Follow Up Actions – Concrete Dust



- Schedule a meeting with the three concrete facilities located in the area
 - Mutually develop solutions to the community's concerns.
- Increase the Department's inspection of the three concrete facilities in the winter
 - Dust levels are highest in the area during colder months.



Follow Up Actions – Concrete Dust

- Add additional control measures to air quality permits for the facilities:
 - Use non-water dust suppressant materials, such as the salt solutions used by DelDOT, to control dust in cold weather
 - Prevents freezing of water on roads – safety hazard
 - Require additional control measures for crushed concrete piles (watering piles, etc.)



Photo Credit: DelDOT

Follow Up Actions – Soil Dust

- Water Runoff
 - Ensure that all three facilities are meeting the requirements of the DNREC Division of water program - secondary benefit to air quality.
- Stormwater Drains
 - Contact facilities about sweeping the street adjacent to their properties on Heald Street.



Photo Credit: DNREC Division of Water

Follow Up Actions – Soil Dust

- Discussing additional control measures that may be added to air quality permits for the facilities:
 - Investigate the use of trackout control mats or truck washing on-site.



Resources

- DNREC Special Projects page where you can find the report and analytical report
 - <https://dnrec.alpha.delaware.gov/air/quality/monitoring/special-projects/>
- DNREC Air Monitoring page, where you can find our Annual Air Quality Reports at the bottom, as well as our Annual Network Plan and 5-Year Network Assessment
 - <https://dnrec.alpha.delaware.gov/air/quality/monitoring/>
- DNREC PM Advance page
 - <https://dnrec.alpha.delaware.gov/air/quality/particulate-matter/pm-advance/>
- EPA Particulate Matter information page, includes info on the standard
 - <https://www.epa.gov/pm-pollution>

Follow-up questions: daqpermittinginfo@Delaware.gov



Thank you for
attending this
meeting.

